


August 12, 1998

M E M O R A N D U M

TO: Orville D. Green, Assistant Administrator  
Air and Hazardous Waste

FROM: Susan J. Richards, Chief   
Air Quality Permitting Bureau

SUBJECT: P-980063, J.R. Simplot Co., Don Siding Facility,  
Pocatello  
(Removal of Cyclonic Scrubber)

PROJECT DESCRIPTION

On May 22, 1998, the Idaho Department of Health and Welfare, Division of Environmental Quality (DEQ) received a submittal from the J.R. Simplot Company to remove the cyclonic scrubber from the Granulation III operating unit at the Don Siding Facility. The removal of the scrubber results in an increase of PM and fluoride emissions but the increases are not significant and do not exceed the currently effective permit limits.

DISCUSSION

On May 22, 1998, DEQ received a submittal from the J.R. Simplot Company to modify their currently effective Tier II Operating Permit. The application was determined complete on June 18, 1998.

FEES

This facility is a major facility as defined by IDAPA 16.01.01.008.14; therefore, registration and registration fees, in accordance with IDAPA 16.01.01.527, are applicable. According to the Air Emission Fees Master Data list dated July 28, 1998, this facility has registered 4,583.54 tons by paying fees. This modification will increase the amount of pollutants to be registered by approximately \$57.83 (\$30 \* 1.93 tons).

RECOMMENDATION

Based on review of application materials and all applicable state and federal rules and regulations, staff recommend that the J.R. Simplot company be issued modified Tier II Operating Permit No. 077-00006 for the Don Siding Facility. No public comment period is recommended, no entity has requested a comment period, and the project does not involve PSD Permit to Construct requirements.

SJR/BR/ms

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cc: Pat Rayne, AFS  
Robert Wilkosz, TSB  
Pocatello RO  
Source File (077-00006)  
COF

August 12, 1998

MEMORANDUM

TO: Susan J. Richards, Chief  
Air Quality Permitting Bureau

FROM: Bill Rogers, Air Quality Engineer *BR*  
Air Quality Permitting Bureau

SUBJECT: **PERMIT TO CONSTRUCT TECHNICAL ANALYSIS**  
P-980063, J.R. Simplot Co., Don Siding Facility, Pocatello  
(Permit to Construct Applicability)

PURPOSE

The purpose of this memorandum is to satisfy the requirements of IDAPA 16.01.01.200 (Rules for the Control of Air Pollution in Idaho) for issuing Permits to Construct (PTC).

PROJECT DESCRIPTION

On May 22, 1998, the Idaho Department of Health and Welfare, Division of Environmental Quality (DEQ) received a submittal from the J.R. Simplot Company (Simplot) requesting approval to remove the cyclonic scrubber from the Granulation III operating unit at the Don Siding facility. Simplot has also requested removal of the reference for the cyclonic scrubber from their currently effective Tier II Operating Permit No. 077-00006 (OP). This permit was issued on June 29, 1995 as a SIP permit for the Pocatello PM-10 nonattainment area.

The cyclonic scrubber is an intermediate control device positioned in series between a cyclone and a high performance venturi scrubber (Entroleter). The cyclonic scrubber was intended to protect the Entroleter, the primary control device, from sludge and silicate scaling that had been observed by the previously used process. However, after startup of the process, it became obvious that protection of the Entroleter by the cyclonic scrubber was not necessary. Nevertheless, Simplot chose to leave the cyclonic scrubber in place and has operated the process in this arrangement for the past twenty-plus years.

The present physical condition of the cyclonic scrubber has raised questions about its effectiveness controlling PM and fluoride emissions. To that end, Simplot personnel ran a series of performance tests to determine the effect the removal of the cyclonic scrubber has on emissions. Five performance tests were run to measure PM emissions and three tests were run to measure fluoride emissions. In each test run, emissions were measured both with and without liquor flowing through the cyclonic scrubber. The latter was to simulate removal of the scrubber. With no liquor flowing, the average increase in PM emissions was only 0.44 lb/hr, and the increase in fluoride emissions was only 0.28 lb/hr. A couple of the test runs showed a decrease in emissions when no liquor was flowing. This is most likely due to the increase in the pressure drop across the Entroleter. However, to be conservative, only those tests that showed an increase in emissions when no liquor was flowing through the cyclonic scrubber were used in this analysis.

The permit mentioned above provides enforceable operating and emission limits for the entire facility. For the Granulation III operating unit,

fluoride emission limit is 1.7 lb/hr. The increases in PM and fluoride emissions, as measured by the source tests, do not result in an exceedence of the permit limits. In fact, the average PM and fluoride emission rates measured during the source tests were 3.79 lb/hr and 0.94 lb/hr, respectively. Again, these are the emission rates that reflect the increases only.

This permitting action is a modification since emissions are shown to increase. Even though the permit is an OP, the increases in emissions must be reviewed for PSD applicability purposes. The emissions increases are not significant, and when added to the source test results, do not exceed the permitted limits. In order to ensure compliance with the permit limits, annual source testing for PM emissions is required by the OP. Fluoride emissions are regulated by operating/throughput limits. Because testing is already required, additional testing will not be required upon issuance of the modified Tier II permit.

#### SUMMARY OF EVENTS

On May 22, 1998, DEQ received a submittal from Simplot to modify their currently effective OP. The submittal was determined complete on June 18, 1998.

#### DISCUSSION

##### 1. Area Classification

J.R. Simplot's Don Siding facility is located in Pocatello, Idaho. Pocatello is located in the Power/Bannock County PM-10 nonattainment area. The area is designated as an attainment or unclassifiable area for all other regulated criteria air pollutants.

##### 2. Facility Classification

This facility is a major facility as defined by IDAPA 16.01.01.006.54. The facility is a designated facility as defined by IDAPA 16.01.01.006.25. The facility is subject to federal regulation in accordance with 40 CFR 60 Subpart T, 40 CFR 60 Subpart U, 40 CFR 60 Subpart G, and 40 CFR 60 Subpart H. The SIC code defining the facility is 2874 and the facility is classified as A1. The facility is located in AQCR 61 and Zone 12.

##### 3. Regulatory Review

The J.R. Simplot company proposes to modify their existing Tier II Operating Permit. The modification is a minor modification to an existing major facility. The following rules were reviewed for this permitting action:

<u>IDAPA 16.01.01.201</u>	Permit to Construct;
<u>IDAPA 16.01.01.202</u>	Application Procedures;
<u>IDAPA 16.01.01.203</u>	Permit Requirements for New and Modified Stationary Sources;
<u>IDAPA 16.01.01.209</u>	Procedures for Issuing Permits;

IDAPA 16.01.01.211

Conditions for Permits to Construct;

IDAPA 16.01.01.212

Obligation to Comply; and

IDAPA 16.01.01.625

Visible Emissions.

4. Emission Estimates

PM and fluoride emissions associated with this modification were measured during source tests conducted in 1996 (PM) and 1997 (fluoride). The purpose for the tests was to determine the effect the removal of the cyclonic scrubber had on emissions from the Granulation III operating unit. The following table lists the results of those tests.

Table 1. PM Source Test Results - Granulation III Cyclonic Scrubber (Units are in pounds per hour [lb/hr])

Test Run	1	2	3	4	5
Liquor Flowing	3.23	4.10	2.74	4.03	4.13
No Liquor Flowing	3.43	4.25	3.70	3.07	2.83

The results of the tests indicate slight increases for tests 1, 2, and 3 when no scrubber liquor was flowing. Emission decreases are shown for tests 4 and 5. The average PM increase for tests 1, 2 and 3 is 0.44 lb/hr.

Fluoride emissions were also measured using the applicable reference method. The following table summarizes the results of the three test runs conducted.

Table 2. Fluoride Test Results - Granulation III Cyclonic Scrubber (Units are in lb/hr)

Test Run	1	2	3
Liquor Flowing	1.41	0.94	0.66
No Liquor Flowing	0.83	0.81	0.94

The only test run that shows an increase in emissions is test run 3. The increase for that test is 0.28 lb/hr.

In summary, this modification is not a major modification. The increases in emissions that may result from the removal of the cyclonic scrubber are not anticipated to exceed any applicable permit limit. Compliance with the applicable permit limits are required on an annual basis as mandated by the OP.

5. Modeling

A modeling analysis was not conducted for this modification because the increase in emissions is not significant and the measured emission rates do not exceed the permit limits.

6. Interbureau Coordination

This document will be routed internally for Title V Operating Permit applicability.

7. AIRS

The AIRS database for this facility has been updated to reflect this permit modification. The updated AIRS information is presented as Appendix A of this document.

9. Fees

This facility is a major facility as defined by IDAPA 16.01.01.008.14; therefore, registration and registration fees, in accordance with IDAPA 16.01.01.527, are applicable. According to the Air Emission Fees Master Data list dated July 28, 1998, this facility has registered 4,583.54 tons by paying fees. This modification will increase the amount of pollutants to be registered by approximately \$57.83 (\$30 \* 1.93 tons).

RECOMMENDATION

Based on review of application materials and all applicable state and federal rules and regulations, staff recommend that the J.R. Simplot company be issued modified Tier II Operating Permit #077-00006 for the Don Siding facility. No public comment period is recommended, no entity has requested a comment period, and the project does not involve PSD Permit to Construct requirements.

BR/ms            G:\AHW\ROGERS\SIMPLOT\980063.TM

cc: Pat Rayne, AFS  
Dan Salgado, AQPB-OP  
Robert Wilkosz, TSB  
Pocatello RO  
Source File (077-00006)  
COF